

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Hill Manufacturing Inc.

Oklahoma Alliance for Manufacturing Excellence

Hill Manufacturing Uses Lean Techniques To Get To The Top

Client Profile:

Hill Manufacturing, in Broken Arrow, Oklahoma, is a CNC machining and assembly shop supplying precision components to a variety of industrial companies. It is one of the less than one percent of Oklahoma manufacturing companies owned and operated by a woman. Founded in 1977, the company employs approximately 30 people. Cheryl Hill became president and sole owner in 1996.

Situation:

Hill Manufacturing's customers wanted the company be more responsive in the areas of on-time delivery, provide shorter lead times from order to delivery, and offer frequent deliveries of small quantities of items (known as just-in-time manufacturing). All of the systems within the company needed upgrading, including the administrative processing of orders, shop floor operations, quality systems, and purchasing. The Oklahoma Alliance for Manufacturing Excellence (The Alliance), a NIST MEP network affiliate, worked with upper management to develop a plan for implementing new techniques in a way that included employee training and participation. Most immediately, the company needed help to meet the supply chain management requirements for a tractor component supplied to John Deere.

Solution:

The Alliance planned and helped facilitate activities at Hill Manufacturing to put in place a continuous flow work cell that included multiple processes of machining, welding, and packing. As in many cases, The Alliance utilized value stream mapping techniques to create a vision of the final objectives before any equipment was moved. The map, along with data concerning the operation cycle times and customer demand frequency, clearly showed that a continuous work cell was feasible. The Alliance facilitated an employee team that designed the work cell to achieve optimum results. This team was made up of employees who had all been trained in the basic principles of lean manufacturing and understood one-piece flow and full signals. The resulting improvement solidified Hill Manufacturing's relationship with John Deere and secured future contracts with the tractor maker.

Results:

Reduced work-in-process by 67 percent.

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Reduced production time required per month by 70 percent.

Reduced set-up time by 83 percent.

Reduced part travel distance by 81 percent.

Freed space for a new product line without additional capital expenditure.

Testimonial:

"The work of The Oklahoma Alliance for Manufacturing Excellence made a real bottom-line improvement in our company. The changes make a significant difference not only at Hill Manufacturing but throughout our community."

Cheryl Hill, Owner and President